

#### DESIGN TARGET DETAILS

Name	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Billings 1B-34H PBHL P4	-4622.7	-39.2	1275661.61	3143886.60	40.088930	-104.985750

Last Cathedral Survey @ 11,999' MD

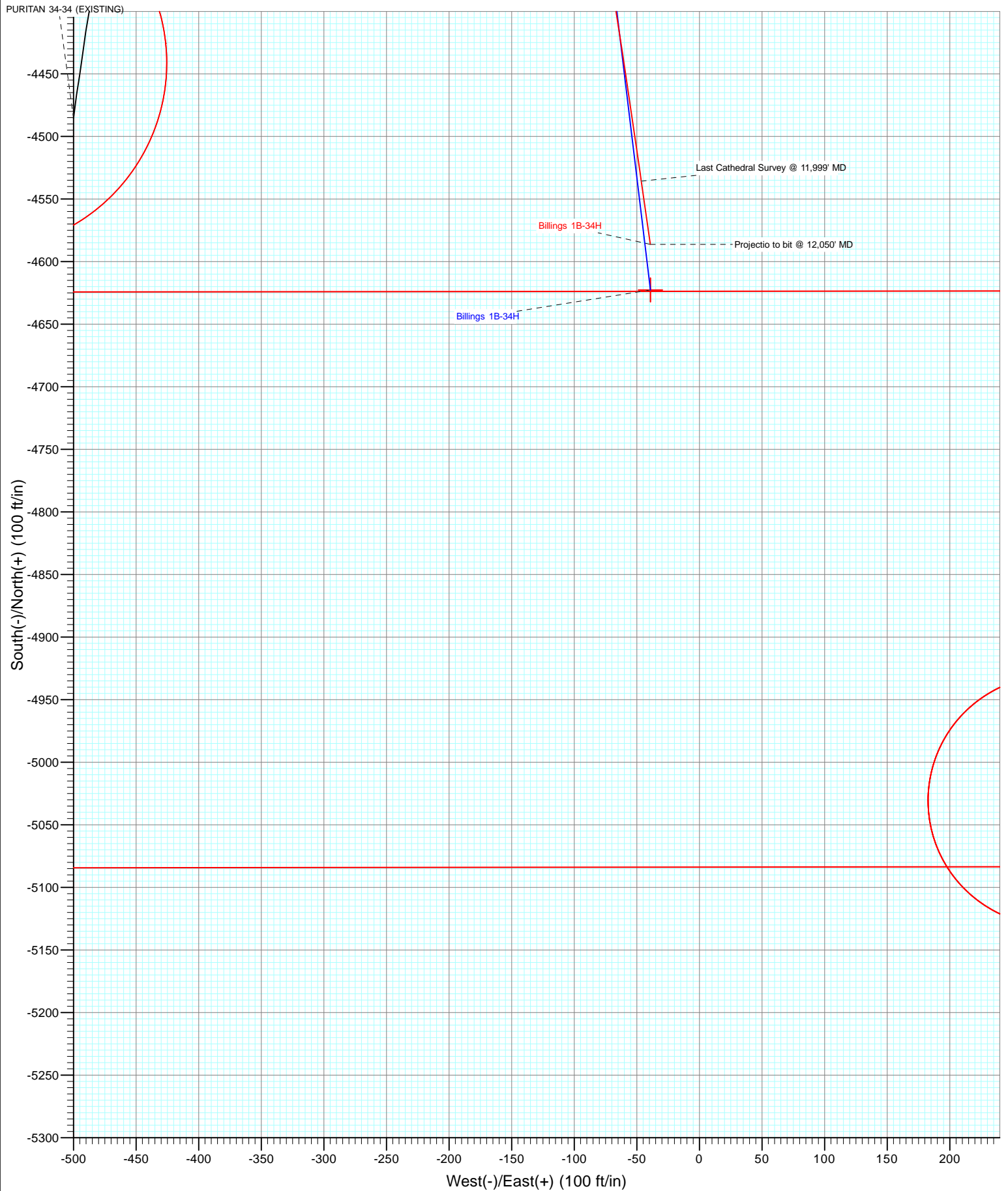
Projectio to bit @ 12,050' MD

Billings 1B-34H PBHL P4

Vertical Section at 180.00° (1000 ft/in)



Project: DJ Wattenberg  
Site: S34-T2N-R68W (Billings)  
Well: Billings 1B-34H  
Wellbore: Hz  
Design: FINAL



# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Billings 1B-34H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Site:</b>	S34-T2N-R68W (Billings)	<b>MD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Well:</b>	Billings 1B-34H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

<b>Project</b>	DJ Wattenberg		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	Colorado Northern Zone		

Site		S34-T2N-R68W (Billings)			
Site Position:		Northing:	1,280,284.39 ft	Latitude:	40.101620
From:	Lat/Long	Easting:	3,143,887.76 ft	Longitude:	-104.985650
Position Uncertainty:	0.0 ft	Slot Radius:	13.200 in	Grid Convergence:	0.33 °

Well	Billings 1B-34H					
Well Position	+N/-S	0.0 ft	Northing:	1,280,284.44 ft	Latitude:	40.101620
	+E/-W	0.0 ft	Easting:	3,143,898.95 ft	Longitude:	-104.985610
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,995.0 ft

<b>Wellbore</b>	Hz				
<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	10/21/2013	8.64	66.69	52,702

<b>Design</b>	FINAL				
<b>Audit Notes:</b>					
<b>Version:</b>	1.0	<b>Phase:</b>	ACTUAL	<b>Tie On Depth:</b>	0.0
<b>Vertical Section:</b>	<b>Depth From (TVD)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Direction (°)</b>	
	0.0	0.0	0.0	180.00	

<b>Survey Program</b>	<b>Date</b>	11/3/2013			
<b>From (ft)</b>	<b>To (ft)</b>	<b>Survey (Wellbore)</b>	<b>Tool Name</b>	<b>Description</b>	
144.0	12,050.0	Survey #1 (Hz)	Geolink MWD	Geolink MWD	

<b>Survey</b>										
<b>Measured Depth (ft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (ft)</b>	<b>+N/-S (ft)</b>	<b>+E/-W (ft)</b>	<b>Vertical Section (ft)</b>	<b>Dogleg Rate (°/100ft)</b>	<b>Build Rate (°/100ft)</b>	<b>Formations / Comments</b>	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00		
144.0	0.30	292.20	144.0	0.1	-0.3	-0.1	0.21	0.21		
236.0	0.30	242.30	236.0	0.1	-0.8	-0.1	0.28	0.00		
328.0	0.70	290.20	328.0	0.2	-1.5	-0.2	0.59	0.43		
420.0	1.60	350.00	420.0	1.7	-2.3	-1.7	1.51	0.98		
512.0	2.50	347.00	511.9	4.9	-3.0	-4.9	0.98	0.98		
603.0	3.20	349.40	602.8	9.3	-3.9	-9.3	0.78	0.77		
695.0	3.80	347.50	694.6	14.8	-5.0	-14.8	0.66	0.65		
788.0	4.80	341.80	787.4	21.5	-6.9	-21.5	1.17	1.08		
849.0	4.80	345.50	848.2	26.4	-8.3	-26.4	0.51	0.00		
910.0	4.80	354.90	908.9	31.4	-9.2	-31.4	1.29	0.00		
952.0	5.20	356.20	950.8	35.1	-9.5	-35.1	0.99	0.95		
1,007.0	5.50	356.80	1,005.5	40.2	-9.8	-40.2	0.55	0.55		
1,099.0	7.10	346.50	1,097.0	50.1	-11.3	-50.1	2.12	1.74		

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Billings 1B-34H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Site:</b>	S34-T2N-R68W (Billings)	<b>MD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Well:</b>	Billings 1B-34H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
1,191.0	8.70	337.40	1,188.1	62.1	-15.4	-62.1	2.20	1.74	
1,283.0	8.40	326.80	1,279.1	74.1	-21.7	-74.1	1.74	-0.33	
1,375.0	7.30	321.90	1,370.2	84.4	-29.0	-84.4	1.40	-1.20	
1,467.0	7.40	306.90	1,461.5	92.5	-37.3	-92.5	2.08	0.11	
1,559.0	7.60	305.10	1,552.7	99.6	-47.1	-99.6	0.34	0.22	
1,651.0	8.00	298.30	1,643.9	106.1	-57.7	-106.1	1.09	0.43	
1,743.0	6.50	314.90	1,735.1	112.8	-67.0	-112.8	2.78	-1.63	
1,834.0	8.00	317.80	1,825.4	121.1	-74.9	-121.1	1.70	1.65	
1,926.0	7.20	312.90	1,916.6	129.8	-83.4	-129.8	1.12	-0.87	
2,021.0	6.70	316.30	2,010.9	137.9	-91.6	-137.9	0.68	-0.53	
2,116.0	7.60	313.30	2,105.1	146.2	-100.0	-146.2	1.03	0.95	
2,211.0	6.90	314.40	2,199.4	154.5	-108.7	-154.5	0.75	-0.74	
2,305.0	7.20	299.90	2,292.7	161.4	-117.8	-161.4	1.91	0.32	
2,400.0	8.00	302.40	2,386.9	167.9	-128.5	-167.9	0.91	0.84	
2,495.0	5.90	298.00	2,481.1	173.7	-138.4	-173.7	2.28	-2.21	
2,589.0	6.60	314.10	2,574.6	179.7	-146.6	-179.7	2.00	0.74	
2,684.0	6.60	319.70	2,669.0	187.7	-154.0	-187.7	0.68	0.00	
2,779.0	5.50	319.50	2,763.4	195.3	-160.5	-195.3	1.16	-1.16	
2,874.0	5.50	297.60	2,858.0	200.9	-167.5	-200.9	2.20	0.00	
2,968.0	4.10	292.20	2,951.7	204.3	-174.6	-204.3	1.56	-1.49	
3,063.0	4.40	310.60	3,046.4	207.9	-180.5	-207.9	1.46	0.32	
3,158.0	2.00	315.00	3,141.3	211.5	-184.5	-211.5	2.54	-2.53	
3,253.0	0.50	187.20	3,236.2	212.2	-185.7	-212.2	2.46	-1.58	
3,347.0	0.70	182.50	3,330.2	211.2	-185.8	-211.2	0.22	0.21	
3,442.0	0.70	157.00	3,425.2	210.1	-185.6	-210.1	0.33	0.00	
3,537.0	0.10	261.60	3,520.2	209.6	-185.4	-209.6	0.77	-0.63	
3,632.0	1.00	274.60	3,615.2	209.6	-186.3	-209.6	0.95	0.95	
3,726.0	0.60	41.50	3,709.2	210.1	-186.8	-210.1	1.53	-0.43	
3,821.0	0.80	332.20	3,804.2	211.0	-186.8	-211.0	0.86	0.21	
3,916.0	0.10	87.30	3,899.2	211.6	-187.0	-211.6	0.89	-0.74	
4,011.0	0.10	358.30	3,994.2	211.7	-187.0	-211.7	0.15	0.00	
4,105.0	1.40	49.20	4,088.2	212.5	-186.1	-212.5	1.42	1.38	
4,200.0	0.50	97.70	4,183.2	213.2	-184.8	-213.2	1.19	-0.95	
4,295.0	0.50	2.20	4,278.2	213.6	-184.4	-213.6	0.78	0.00	
4,389.0	0.60	197.70	4,372.2	213.5	-184.5	-213.5	1.16	0.11	
4,484.0	0.80	260.40	4,467.2	213.0	-185.3	-213.0	0.79	0.21	
4,579.0	1.10	133.20	4,562.2	212.2	-185.3	-212.2	1.80	0.32	
4,674.0	0.60	134.40	4,657.2	211.2	-184.3	-211.2	0.53	-0.53	
4,768.0	0.50	136.40	4,751.2	210.6	-183.6	-210.6	0.11	-0.11	
4,863.0	0.90	140.70	4,846.2	209.7	-182.9	-209.7	0.42	0.42	
4,958.0	1.30	153.70	4,941.1	208.2	-181.9	-208.2	0.49	0.42	
5,053.0	1.60	162.00	5,036.1	206.0	-181.0	-206.0	0.38	0.32	
5,147.0	1.00	142.40	5,130.1	204.1	-180.1	-204.1	0.79	-0.64	
5,242.0	1.10	13.60	5,225.1	204.3	-179.4	-204.3	1.99	0.11	
5,336.0	1.20	15.40	5,319.1	206.1	-178.9	-206.1	0.11	0.11	
5,431.0	1.20	357.00	5,414.0	208.1	-178.7	-208.1	0.40	0.00	
5,526.0	1.10	0.40	5,509.0	210.0	-178.8	-210.0	0.13	-0.11	
5,621.0	1.10	330.60	5,604.0	211.7	-179.2	-211.7	0.60	0.00	
5,715.0	0.90	350.10	5,698.0	213.2	-179.8	-213.2	0.42	-0.21	
5,810.0	0.70	276.40	5,793.0	214.0	-180.5	-214.0	1.02	-0.21	
5,905.0	0.40	304.60	5,888.0	214.2	-181.3	-214.2	0.42	-0.32	
5,999.0	0.70	197.10	5,982.0	213.9	-181.8	-213.9	0.96	0.32	
6,094.0	0.60	121.10	6,077.0	213.1	-181.5	-213.1	0.85	-0.11	
6,189.0	0.70	92.90	6,172.0	212.8	-180.5	-212.8	0.35	0.11	

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Billings 1B-34H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Site:</b>	S34-T2N-R68W (Billings)	<b>MD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Well:</b>	Billings 1B-34H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
6,283.0	1.10	92.50	6,265.9	212.7	-179.0	-212.7	0.43	0.43	
6,378.0	0.30	255.80	6,360.9	212.6	-178.4	-212.6	1.46	-0.84	
6,472.0	0.60	95.20	6,454.9	212.5	-178.1	-212.5	0.95	0.32	
6,567.0	0.80	179.10	6,549.9	211.8	-177.6	-211.8	1.00	0.21	
6,662.0	0.80	92.60	6,644.9	211.1	-176.9	-211.1	1.15	0.00	
6,757.0	1.40	35.70	6,739.9	212.0	-175.6	-212.0	1.24	0.63	
6,851.0	1.50	62.40	6,833.9	213.5	-173.8	-213.5	0.72	0.11	
6,883.0	2.00	50.70	6,865.9	214.1	-173.0	-214.1	1.91	1.56	
6,914.0	1.10	122.40	6,896.9	214.3	-172.4	-214.3	6.31	-2.90	
6,946.0	4.10	166.50	6,928.8	213.0	-171.8	-213.0	10.62	9.37	
6,977.0	7.50	171.40	6,959.7	209.9	-171.3	-209.9	11.07	10.97	
7,009.0	9.70	174.70	6,991.3	205.1	-170.7	-205.1	7.04	6.87	
7,040.0	12.20	178.70	7,021.7	199.3	-170.4	-199.3	8.42	8.06	
7,072.0	15.20	184.20	7,052.8	191.7	-170.6	-191.7	10.21	9.37	
7,103.0	18.20	186.30	7,082.5	182.8	-171.5	-182.8	9.87	9.68	
7,135.0	20.80	182.90	7,112.7	172.2	-172.3	-172.2	8.86	8.12	
7,166.0	23.70	179.20	7,141.4	160.5	-172.5	-160.5	10.39	9.35	
7,198.0	27.20	178.30	7,170.3	146.7	-172.2	-146.7	11.00	10.94	
7,229.0	30.40	177.30	7,197.4	131.8	-171.6	-131.8	10.44	10.32	
7,261.0	34.00	177.50	7,224.5	114.8	-170.8	-114.8	11.25	11.25	
7,292.0	37.20	178.10	7,249.7	96.7	-170.1	-96.7	10.38	10.32	
7,324.0	40.20	179.40	7,274.7	76.7	-169.7	-76.7	9.71	9.37	
7,355.0	43.70	181.20	7,297.7	56.0	-169.8	-56.0	11.94	11.29	
7,387.0	47.10	182.10	7,320.2	33.2	-170.5	-33.2	10.81	10.62	
7,418.0	50.90	182.20	7,340.5	9.9	-171.4	-9.9	12.26	12.26	
7,450.0	54.60	181.60	7,359.9	-15.6	-172.2	15.6	11.66	11.56	
7,482.0	59.00	180.60	7,377.4	-42.3	-172.7	42.3	14.00	13.75	
7,513.0	63.00	179.90	7,392.4	-69.5	-172.8	69.5	13.05	12.90	
7,545.0	67.40	178.90	7,405.9	-98.5	-172.5	98.5	14.04	13.75	
7,576.0	72.20	178.00	7,416.6	-127.6	-171.7	127.6	15.72	15.48	
7,608.0	75.60	178.60	7,425.4	-158.3	-170.8	158.3	10.78	10.62	
7,639.0	78.00	180.20	7,432.5	-188.5	-170.5	188.5	9.23	7.74	
7,671.0	80.60	181.80	7,438.4	-219.9	-171.1	219.9	9.49	8.12	
7,688.0	82.00	182.80	7,441.0	-236.7	-171.7	236.7	10.08	8.24	
7,759.0	85.80	182.30	7,448.6	-307.2	-174.9	307.2	5.40	5.35	
7,822.0	87.40	181.20	7,452.3	-370.1	-176.8	370.1	3.08	2.54	
7,917.0	89.70	180.10	7,454.7	-465.0	-177.9	465.0	2.68	2.42	
8,011.0	89.90	178.40	7,455.0	-559.0	-176.7	559.0	1.82	0.21	
8,106.0	89.80	177.20	7,455.3	-653.9	-173.0	653.9	1.27	-0.11	
8,201.0	90.50	177.10	7,455.0	-748.8	-168.3	748.8	0.74	0.74	
8,296.0	89.80	177.60	7,454.8	-843.7	-163.9	843.7	0.91	-0.74	
8,391.0	89.30	179.30	7,455.5	-938.7	-161.3	938.7	1.87	-0.53	
8,485.0	90.20	180.30	7,455.9	-1,032.7	-161.0	1,032.7	1.43	0.96	
8,580.0	87.40	180.80	7,457.9	-1,127.6	-161.9	1,127.6	2.99	-2.95	
8,675.0	86.90	180.00	7,462.6	-1,222.5	-162.6	1,222.5	0.99	-0.53	
8,770.0	87.30	180.60	7,467.5	-1,317.4	-163.1	1,317.4	0.76	0.42	
8,833.0	86.80	181.40	7,470.7	-1,380.3	-164.2	1,380.3	1.50	-0.79	
8,896.0	86.90	182.10	7,474.2	-1,443.2	-166.1	1,443.2	1.12	0.16	
8,959.0	87.90	182.70	7,477.0	-1,506.1	-168.7	1,506.1	1.85	1.59	
9,053.0	90.00	182.90	7,478.7	-1,599.9	-173.3	1,599.9	2.24	2.23	
9,148.0	91.40	182.80	7,477.6	-1,694.8	-178.0	1,694.8	1.48	1.47	
9,243.0	91.00	182.10	7,475.6	-1,789.7	-182.1	1,789.7	0.85	-0.42	
9,338.0	90.40	181.00	7,474.4	-1,884.6	-184.7	1,884.6	1.32	-0.63	
9,432.0	91.80	179.90	7,472.6	-1,978.6	-185.4	1,978.6	1.89	1.49	

# Cathedral Energy Services

## Survey Report

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<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Site:</b>	S34-T2N-R68W (Billings)	<b>MD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Well:</b>	Billings 1B-34H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Formations / Comments
9,527.0	90.90	180.40	7,470.4	-2,073.6	-185.6	2,073.6	1.08	-0.95	
9,622.0	89.30	179.90	7,470.2	-2,168.6	-185.9	2,168.6	1.76	-1.68	
9,716.0	90.10	179.90	7,470.7	-2,262.6	-185.7	2,262.6	0.85	0.85	
9,811.0	88.00	180.50	7,472.3	-2,357.6	-186.1	2,357.6	2.30	-2.21	
9,906.0	89.80	179.00	7,474.1	-2,452.5	-185.6	2,452.5	2.47	1.89	
10,001.0	88.80	178.70	7,475.3	-2,547.5	-183.7	2,547.5	1.10	-1.05	
10,096.0	89.90	180.10	7,476.3	-2,642.5	-182.7	2,642.5	1.87	1.16	
10,191.0	89.90	179.80	7,476.5	-2,737.5	-182.7	2,737.5	0.32	0.00	
10,285.0	91.30	179.70	7,475.5	-2,831.5	-182.3	2,831.5	1.49	1.49	
10,380.0	90.90	180.40	7,473.7	-2,926.5	-182.3	2,926.5	0.85	-0.42	
10,475.0	90.60	180.00	7,472.5	-3,021.5	-182.7	3,021.5	0.53	-0.32	
10,570.0	89.20	180.10	7,472.6	-3,116.5	-182.8	3,116.5	1.48	-1.47	
10,665.0	90.10	179.50	7,473.2	-3,211.5	-182.4	3,211.5	1.14	0.95	
10,759.0	87.70	179.40	7,475.0	-3,305.4	-181.5	3,305.4	2.56	-2.55	
10,854.0	87.00	179.10	7,479.4	-3,400.3	-180.3	3,400.3	0.80	-0.74	
10,948.0	88.00	178.30	7,483.5	-3,494.2	-178.1	3,494.2	1.36	1.06	
11,043.0	89.50	177.60	7,485.6	-3,589.1	-174.7	3,589.1	1.74	1.58	
11,138.0	89.40	175.70	7,486.5	-3,683.9	-169.2	3,683.9	2.00	-0.11	
11,233.0	89.40	174.70	7,487.5	-3,778.6	-161.2	3,778.6	1.05	0.00	
11,327.0	89.40	172.70	7,488.5	-3,872.0	-150.9	3,872.0	2.13	0.00	
11,422.0	88.90	170.50	7,489.9	-3,966.0	-137.1	3,966.0	2.37	-0.53	
11,517.0	89.40	170.50	7,491.3	-4,059.7	-121.4	4,059.7	0.53	0.53	
11,611.0	89.40	170.80	7,492.3	-4,152.4	-106.1	4,152.4	0.32	0.00	
11,706.0	89.30	170.70	7,493.4	-4,246.2	-90.8	4,246.2	0.15	-0.11	
11,801.0	89.50	171.10	7,494.3	-4,340.0	-75.8	4,340.0	0.47	0.21	
11,896.0	89.50	171.40	7,495.2	-4,433.9	-61.4	4,433.9	0.32	0.00	
11,991.0	89.40	171.90	7,496.1	-4,527.9	-47.6	4,527.9	0.54	-0.11	
11,999.0	89.40	171.90	7,496.2	-4,535.8	-46.4	4,535.8	0.00	0.00	Last Cathedral Survey @ 11,999' MD
12,050.0	89.40	171.90	7,496.7	-4,586.3	-39.3	4,586.3	0.00	0.00	Projectio to bit @ 12,050' MD

# Cathedral Energy Services

## Survey Report

<b>Company:</b>	EnCana Oil & Gas (USA) Inc	<b>Local Co-ordinate Reference:</b>	Well Billings 1B-34H
<b>Project:</b>	DJ Wattenberg	<b>TVD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Site:</b>	S34-T2N-R68W (Billings)	<b>MD Reference:</b>	WELL @ 5008.0ft (Ensign 135)
<b>Well:</b>	Billings 1B-34H	<b>North Reference:</b>	True
<b>Wellbore:</b>	Hz	<b>Survey Calculation Method:</b>	Minimum Curvature
<b>Design:</b>	FINAL	<b>Database:</b>	USA EDM 5000 Multi Users DB

Targets									
Target Name									
- hit/miss target	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- Shape	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
Billings 1B-34H PBHL	0.00	0.00	7,385.0	-4,622.7	-39.2	1,275,661.61	3,143,886.60	40.088930	-104.985750
- actual wellpath misses target center by 117.5ft at 12050.0ft MD (7496.7 TVD, -4586.3 N, -39.3 E)									
- Point									
Billings 1B-34H PBHL P.	0.00	0.00	7,501.0	-4,622.7	-39.2	1,275,661.61	3,143,886.60	40.088930	-104.985750
- actual wellpath misses target center by 36.7ft at 12050.0ft MD (7496.7 TVD, -4586.3 N, -39.3 E)									
- Point									
Billings 1B-34H TGT 9,3	0.00	0.00	7,476.0	-1,935.7	-180.9	1,278,347.69	3,143,729.24	40.096306	-104.986257
- actual wellpath misses target center by 4.9ft at 9389.0ft MD (7473.7 TVD, -1935.7 N, -185.3 E)									
- Point									
Billings 1B-34H TGT 10,	0.00	0.00	7,476.0	-3,270.4	-180.7	1,277,013.06	3,143,737.23	40.092642	-104.986256
- actual wellpath misses target center by 2.4ft at 10724.0ft MD (7473.9 TVD, -3270.4 N, -181.9 E)									
- Point									
Billings 1B-34H TGT	0.00	0.00	7,385.0	-702.1	-181.0	1,279,581.32	3,143,722.03	40.099693	-104.986257
- actual wellpath misses target center by 71.1ft at 8153.9ft MD (7455.3 TVD, -701.7 N, -170.6 E)									
- Point									
Billings 1B-34H TGT 10,	0.00	0.00	7,476.0	-3,535.7	-180.6	1,276,747.72	3,143,738.82	40.091914	-104.986256
- actual wellpath misses target center by 9.5ft at 10989.2ft MD (7484.7 TVD, -3535.4 N, -176.8 E)									
- Point									

Design Annotations				
Measured Depth	Vertical Depth	Local Coordinates		Comment
(ft)	(ft)	+N/-S (ft)	+E/-W (ft)	
11,999.0	7,496.2	-4,535.8	-46.4	Last Cathedral Survey @ 11,999' MD
12,050.0	7,496.7	-4,586.3	-39.3	Projectio to bit @ 12,050' MD

Checked By: _____	Approved By: _____	Date: _____
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